

Message

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**From:** Beck, Nancy [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=168ECB5184AC44DE95A913297F353745-BECK, NANCY]  
**Sent:** 5/30/2019 5:18:30 PM  
**To:** Hanley, Mary [Hanley.Mary@epa.gov]  
**Subject:** RE: HEC Followup Question on PFAS Subgroups

Her edit is fine. thanks.

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Nancy B. Beck, Ph.D., DABT  
Principal Deputy Assistant Administrator, OCSP  
P: 202-564-1273  
[beck.nancy@epa.gov](mailto:beck.nancy@epa.gov)

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**From:** Hanley, Mary  
**Sent:** Thursday, May 30, 2019 1:02 PM  
**To:** Beck, Nancy <[Beck.Nancy@epa.gov](mailto:Beck.Nancy@epa.gov)>  
**Subject:** FW: HEC Followup Question on PFAS Subgroups

See Tala's comment and edit to your edits.

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**From:** Henry, Tala  
**Sent:** Thursday, May 30, 2019 12:52 PM  
**To:** Hanley, Mary <[Hanley.Mary@epa.gov](mailto:Hanley.Mary@epa.gov)>  
**Cc:** Scheifele, Hans <[Scheifele.Hans@epa.gov](mailto:Scheifele.Hans@epa.gov)>; Morris, Jeff <[Morris.Jeff@epa.gov](mailto:Morris.Jeff@epa.gov)>; Beck, Nancy <[Beck.Nancy@epa.gov](mailto:Beck.Nancy@epa.gov)>  
**Subject:** RE: HEC Followup Question on PFAS Subgroups

I don't agree with the part I redlined.

**Deliberative Process / Ex. 5**

**Deliberative Process / Ex. 5**

Am fine with the rest

Tala R. Henry, Ph.D.  
Deputy Director  
Office of Pollution Prevention and Toxics  
U.S. Environmental Protection Agency

T: 202-564-2959  
E: [henry.tala@epa.gov](mailto:henry.tala@epa.gov)

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**From:** Hanley, Mary  
**Sent:** Thursday, May 30, 2019 12:05 PM  
**To:** Henry, Tala <[Henry.Tala@epa.gov](mailto:Henry.Tala@epa.gov)>  
**Cc:** Scheifele, Hans <[Scheifele.Hans@epa.gov](mailto:Scheifele.Hans@epa.gov)>; Morris, Jeff <[Morris.Jeff@epa.gov](mailto:Morris.Jeff@epa.gov)>  
**Subject:** RE: HEC Followup Question on PFAS Subgroups

Hi Tala,  
Nancy had the following edits and Alex is good with the responses once these edits are made. Thanks  
M

## TEFs

The Toxicity Equivalence Factor approach is a method that can be used to facilitate risk assessment of groups of chemicals, in particular allowing for assessment of risks associated with exposure to mixtures of chemicals with similar structures/biological activities. EPA has established TEFs and guidance for applying them in risk assessment for polycyclic aromatic hydrocarbons (PAHs)

([file:///C:/Users/THENRY02/Desktop/FLUORIDE/PAH\\_GUIDANCE1993.PDF](file:///C:/Users/THENRY02/Desktop/FLUORIDE/PAH_GUIDANCE1993.PDF)) and Dioxins and PCBs (<https://www.epa.gov/sites/production/files/2013-09/documents/tefs-for-dioxin-epa-00-r-10-005-final.pdf> and <https://www.epa.gov/sites/production/files/2013-09/documents/tefs-draft-052808-0804.pdf>).

# Deliberative Process / Ex. 5

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**From:** Henry, Tala  
**Sent:** Wednesday, May 29, 2019 11:18 AM  
**To:** Hanley, Mary <[Hanley.Mary@epa.gov](mailto:Hanley.Mary@epa.gov)>  
**Cc:** Scheifele, Hans <[Scheifele.Hans@epa.gov](mailto:Scheifele.Hans@epa.gov)>; Morris, Jeff <[Morris.Jeff@epa.gov](mailto:Morris.Jeff@epa.gov)>  
**Subject:** RE: HEC Followup Question on PFAS Subgroups

## Deliberative Process / Ex. 5

Tala R. Henry, Ph.D.  
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**From:** Hanley, Mary  
**Sent:** Wednesday, May 29, 2019 10:32 AM  
**To:** Henry, Tala <[Henry.Tala@epa.gov](mailto:Henry.Tala@epa.gov)>

Cc: Scheifele, Hans <[Scheifele.Hans@epa.gov](mailto:Scheifele.Hans@epa.gov)>; Morris, Jeff <[Morris.Jeff@epa.gov](mailto:Morris.Jeff@epa.gov)>

Subject: RE: HEC Followup Question on PFAS Subgroups

Thanks Tala.

**Deliberative Process / Ex. 5**

**Deliberative Process / Ex. 5**

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From: Henry, Tala

Sent: Wednesday, May 29, 2019 9:03 AM

To: Hanley, Mary <[Hanley.Mary@epa.gov](mailto:Hanley.Mary@epa.gov)>

Cc: Scheifele, Hans <[Scheifele.Hans@epa.gov](mailto:Scheifele.Hans@epa.gov)>; Morris, Jeff <[Morris.Jeff@epa.gov](mailto:Morris.Jeff@epa.gov)>; Hanley, Mary <[Hanley.Mary@epa.gov](mailto:Hanley.Mary@epa.gov)>

Subject: FW: HEC Followup Question on PFAS Subgroups

Below are the answers; we already talked to Jerry once and he is “up” on the concepts, so this is not too technical for him.

I would like Andy Gillespie in ORD to look at the yellow paragraph...im waiting to hear back from him

### Grouping

Yes, PFASs, could be “grouped” for assessment. EPA, the Office of Pollution Prevention and Toxics in particular, has for many years used grouping approaches when assessing chemicals with similar structures and biological activities. EPA/OPPT was instrumental in developing and generally follow the Organization for Economic Cooperation and Development’s *Guidance on Grouping of Chemicals* (<http://www.oecd.org/publications/guidance-on-grouping-of-chemicals-second-edition-9789264274679-en.htm>).

### TEFs

The Toxicity Equivalence Factor approach a method that can be used to facilitate risk assessment of groups of chemicals, in particular allowing for assessment of risks associate with exposure to mixtures of chemicals with similar structures/biological activities. EPA has established TEFs and guidance for applying them in risk assessment for polyaromatic hydrocarbons (PAHs)

([file:///C:/Users/THENRY02/Desktop/FLUORIDE/PAH\\_GUIDANCE1993.PDF](file:///C:/Users/THENRY02/Desktop/FLUORIDE/PAH_GUIDANCE1993.PDF)) and Dioxins and PCBs (<https://www.epa.gov/sites/production/files/2013-09/documents/tefs-for-dioxin-epa-00-r-10-005-final.pdf> and <https://www.epa.gov/sites/production/files/2013-09/documents/tefs-draft-052808-0804.pdf>).

**Deliberative Process / Ex. 5**

# Deliberative Process / Ex. 5

## Ongoing EPA Efforts

# Deliberative Process / Ex. 5

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**From:** Hanley, Mary  
**Sent:** Tuesday, May 28, 2019 9:56 PM  
**To:** Scheifele, Hans <[Scheifele.Hans@epa.gov](mailto:Scheifele.Hans@epa.gov)>  
**Cc:** Pierce, Alison <[Pierce.Alison@epa.gov](mailto:Pierce.Alison@epa.gov)>; Henry, Tala <[Henry.Tala@epa.gov](mailto:Henry.Tala@epa.gov)>  
**Subject:** Fwd: HEC Followup Question on PFAS Subgroups

Hi Han's. Please prepare a draft response that OPPT would use as the basis to responding via a call. Thanks  
M

Sent from my iPhone

Begin forwarded message:

**From:** "Kaiser, Sven-Erik" <[Kaiser.Sven-Erik@epa.gov](mailto:Kaiser.Sven-Erik@epa.gov)>  
**Date:** May 28, 2019 at 1:31:48 PM EDT  
**To:** "Keller, Kaitlin" <[keller.kaitlin@epa.gov](mailto:keller.kaitlin@epa.gov)>, "Hanley, Mary" <[Hanley.Mary@epa.gov](mailto:Hanley.Mary@epa.gov)>, "Scheifele, Hans" <[Scheifele.Hans@epa.gov](mailto:Scheifele.Hans@epa.gov)>, "Pierce, Alison" <[Pierce.Alison@epa.gov](mailto:Pierce.Alison@epa.gov)>, "Henry, Tala" <[Henry.Tala@epa.gov](mailto:Henry.Tala@epa.gov)>, "Skane, Elizabeth" <[Skane.Elizabeth@epa.gov](mailto:Skane.Elizabeth@epa.gov)>, "Hartman, Mark" <[Hartman.Mark@epa.gov](mailto:Hartman.Mark@epa.gov)>  
**Subject:** RE: HEC Followup Question on PFAS Subgroups

PFAS classification Team – In addition to the highlighted question below, Jerry Couri with House Energy and Commerce asks how feasible are the creation of toxicity equivalency factors for PFAS subgroups? Please let me know if prefer answering in writing or with a call, and if a call, availability this week? Thanks,  
Sven

Sven-Erik Kaiser  
U.S. EPA  
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1200 Pennsylvania Ave., NW (1305A)  
Washington, DC 20460

202-566-2753 (o)  
202-591-0619 (c)

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**From:** Kaiser, Sven-Erik  
**Sent:** Friday, May 24, 2019 1:56 PM  
**To:** Keller, Kaitlin <keller.kaitlin@epa.gov>; Hanley, Mary <Hanley.Mary@epa.gov>; Scheifele, Hans <Scheifele.Hans@epa.gov>; Pierce, Alison <Pierce.Alison@epa.gov>; Henry, Tala <Henry.Tala@epa.gov>; Skane, Elizabeth <Skane.Elizabeth@epa.gov>  
**Subject:** HEC Followup Question on PFAS Subgroups

TSCA PFAS Team – Thanks for the briefing call earlier in the week. Jerry Couri followed up with the question below about PFAS subclasses. Please take a look and let me know our response.  
Best,  
Sven

Sven-Erik Kaiser  
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Washington, DC 20460  
202-566-2753 (o)  
202-591-0619 (c)

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**From:** Couri, Jerry <JerryCouri@mail.house.gov>  
**Sent:** Thursday, May 23, 2019 11:14 AM  
**To:** Kaiser, Sven-Erik <Kaiser.Sven-Erik@epa.gov>  
**Subject:** PFAS Subgroups

Sven:

Following up from the conversation the other day, can PFAS chemicals be divided into subclasses for review based on chemical structure, physical and chemical properties, and predicted biologic activity? Would this make sense for the Agency's purposes?

■ Jerry

**Gerald S. Couri**

Deputy Chief Counsel, Environment  
Committee on Energy and Commerce, Republican Staff  
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